

ARIOSA H/V

HEAT RECOVERY VENTILATION UNIT FOR HORIZONTAL AND VERTICAL INSTALLATION



ARIOSA HV

Heat Recovery Ventilation Unit for residential applications for horizontal false ceiling installation or vertical installation anchored to the wall.

Structure made of expanded polypropylene (EPP) with internal aerodynamic shaping of the air circuits to minimize pressure drops and noise. Safety closing bands.

Forward curved electronic fans with constant air flow function with a maximum flow rate of 170 m³/h or 250 m³/h depending on the model.

Synthetic panel filters in efficiency class ISO Coarse >65% (ex G4) on the extraction flow and ISO ePM1 >50% (ex F7) on the intake flow; extraction of the filters through independent doors of the cap type, equipped with an ergonomic grip.

Very high efficiency (over 90%) counter-current air-air static recovery unit in the sensitive version and enthalpy exchanger in the enthalpic version, easily removable for cleaning and complete with total by-pass motorized system.

Circular 125 mm diameter aeraulic connections in plastic material equipped with ridges to facilitate the connection operations to the ducts. Independent rotating connectors for maximum installation flexibility.

Electronic control complete with 4 temperatures + relative humidity probes on board the machine for management of ventilation, free-cooling/free-heating, recovery unit defrosting and any pre/post heating systems.

Additional temperature + relative humidity probe on board the control panel.

Remote user interface with LCD panel for complete management of the machine's functions.

Advanced management possible via Modbus or APP for mobile device.

Technical data

ARIOSIA HV Technical data

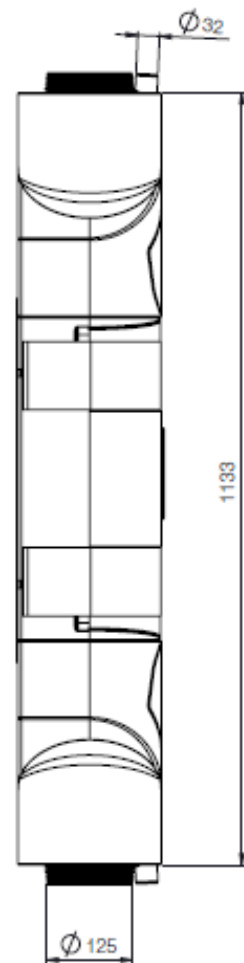
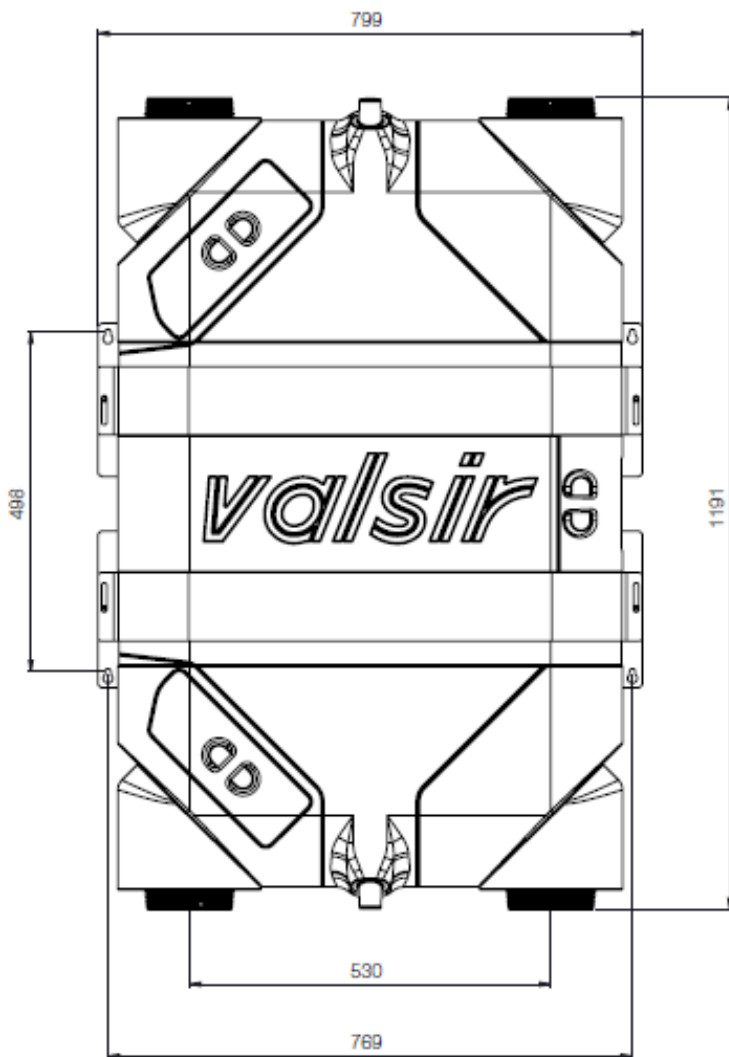
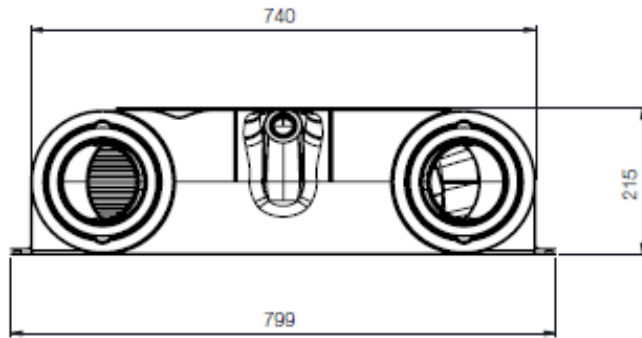
| Model | | ARIOSIA HV 170 | ARIOSIA HV 250 | ARIOSIA HV 170 E | ARIOSIA HV 250 E |
|--|-------------------|-------------------|-------------------|---------------------|---------------------|
| Max air flow rate | m ³ /h | 170 | 250 | 170 | 250 |
| Nominal air flow rate ⁽¹⁾ | m ³ /h | 119 | 175 | 119 | 175 |
| Nominal Static Pressure | Pa | 200 | 200 | 200 | 200 |
| Working mode | °C | -5°C / +45°C | -5°C / +45°C | -5°C / +45°C | -5°C / +45°C |
| Power supply | V/ph/Hz | 220/1/50-60 | 220/1/50-60 | 220/1/50-60 | 220/1/50-60 |
| Max. current ⁽²⁾ | A | 0.537 | 0.915 | 0.522 | 0.898 |
| Maximum absorbed electric power ⁽²⁾ | W | 78.9 | 133.7 | 78.2 | 131.2 |

| Model | | ARIOSIA HV 170 | ARIOSIA HV 250 | ARIOSIA HV 170 E | ARIOSIA HV 250 E |
|---|------------------------|-------------------|-------------------|---------------------|---------------------|
| Declared typology | | UVR-B | | | |
| Drive type | | >3 Multispeed | >3 Multispeed | >3 Multispeed | >3 Multispeed |
| Type of recovery system HRS | | Recuperative | Recuperative | Recuperative | Recuperative |
| SEC class temperate climate | | A+ | A+ | A+ | A+ |
| Specific energy consumption temperate climate | kWh/(m ² a) | -43,73 | -43,09 | -42,68 | -42,1 |
| SEC class cold climate | | A+ | A+ | A+ | A+ |
| Specific energy consumption Cold climate | kWh/(m ² a) | -83,4 | -82,36 | -81,35 | -80,56 |
| SEC class warm climate | | E | E | E | E |
| Specific energy consumption warm climate | kWh/(m ² a) | -18,38 | -17,97 | -17,89 | -17,44 |
| Dry thermal efficiency of the system | % | 91 | 89 | 86 | 85 |
| Efficiency of humidity transfer | % | - | - | 71 | 65 |
| Maximum air flow | m ³ /h | 0,047 | 0,047 | 0,069 | 0,069 |
| Reference air flow | m ³ /s | 0,034 | 0,066 | 0,046 | 0,069 |
| Specific absorbed power | W/(m ³ /h) | 0,22 | 0,24 | 0,21 | 0,23 |
| Reference pressure | Pa | 50 | 50 | 50 | 50 |
| Control factor and typology | Ambient control | 0,65 | 0,65 | 0,65 | 0,65 |
| Annual electricity consumption for 100 m ² | kWh/a | 161,85 | 170,8 | 162,56 | 176,48 |
| Annual heating savings in temperate climates | kWh | 4709,95 | 4668,54 | 4606,43 | 4583,66 |
| Annual heating savings in cold climates | kWh | 9213,9 | 9132,9 | 9011,39 | 8966,84 |
| Annual heating savings in hot climates | kWh | 2129,78 | 2111,05 | 2082,97 | 2072,67 |
| Air tightness class | - | A1 | A1 | A1 | A1 |
| Maximum external leakage | % | 2,2 | 1,9 | 2,7 | 2,0 |
| Maximum internal leakage | % | 2,4 | 1,3 | 3,0 | 2,3 |
| Sound power level radiated | dB(A) | 47,8 | 52,0 | 46,3 | 54,7 |

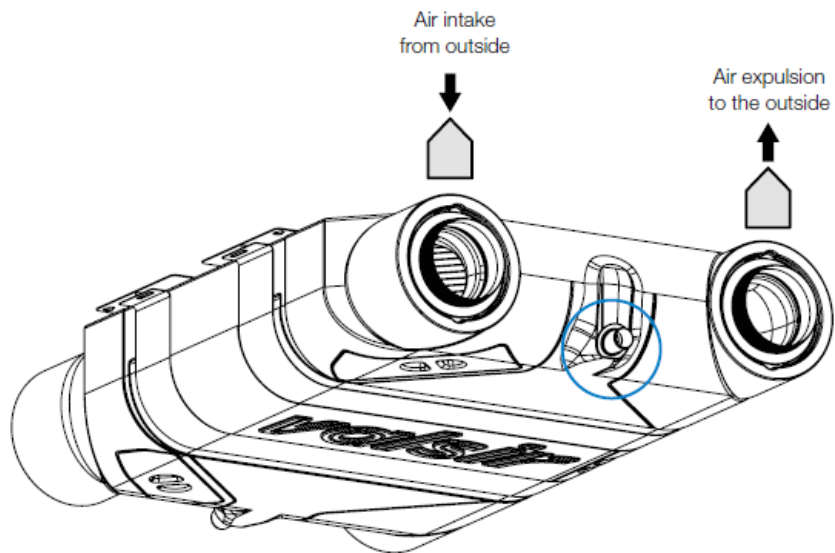
⁽¹⁾ At the reference flow equal to 70% of the maximum value and 50 Pa.

⁽²⁾ Maximum total value of the two fans.

| Heat Recovery Ventilation Unit | | ARIOSHA H/V 170 | ARIOSHA H/V 250 |
|--------------------------------|----|-----------------|-----------------|
| Size | | | |
| Weight | kg | 20 | 20 |
| Package | | | |
| A1' | mm | 1200 | 1200 |
| B' | mm | 800 | 800 |
| C' | mm | 250 | 250 |
| Weight | kg | 22 | 22 |



Possibility of installation: horizontal on the ceiling.



Possibility of installation: vertical on the wall.

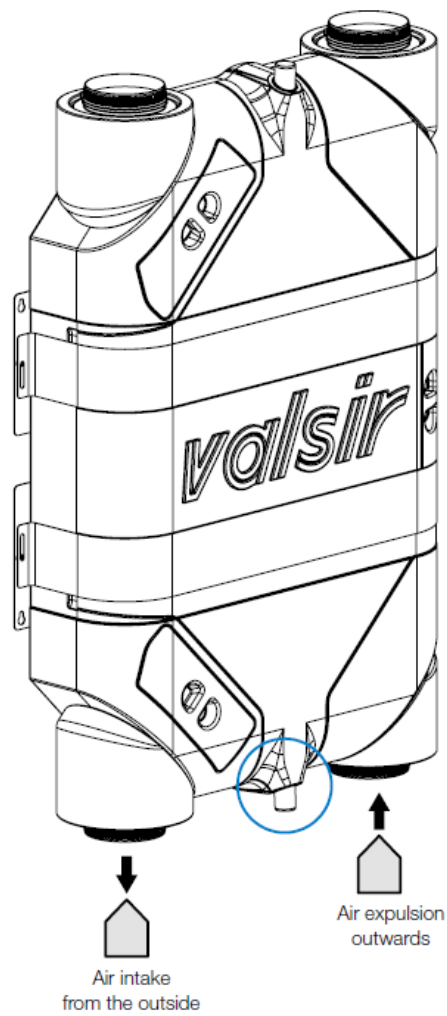


Table: Air flow rate and prevalence ARIOS A HV 170

| Speed | AIR IMMISSION | | | AIR EXTRACTION | | |
|-------------------------|---------------------|-----------------------------------|---------------|---------------------|-----------------------------------|---------------|
| | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] |
| Max. Air flow rate | 50,5 | 181,8 | 3,3 | 49,6 | 178,6 | 3,3 |
| Max. Air flow rate | 49,9 | 179,6 | 40,0 | 48,9 | 176,0 | 41,2 |
| Max. Air flow rate | 49,0 | 176,4 | 79,7 | 49,0 | 176,4 | 82,8 |
| Max. Air flow rate | 49,0 | 176,4 | 122,5 | 49,7 | 178,9 | 120,0 |
| Max. Air flow rate | 49,1 | 176,8 | 160,2 | 50,0 | 180,0 | 161,7 |
| Max. Air flow rate | 44,5 | 160,2 | 198,7 | 48,1 | 173,2 | 198,7 |
| Max. Air flow rate | 36,9 | 132,8 | 245,3 | 40,6 | 146,2 | 241,7 |
| Max. Air flow rate | 32,6 | 117,4 | 279,2 | 35,9 | 129,2 | 276,4 |
| Max. Air flow rate | 25,5 | 91,8 | 323,8 | 18,6 | 67,0 | 317,4 |
| Max. Air flow rate | 12,8 | 46,1 | 356,1 | 10,2 | 36,7 | 357,6 |
| Max. Air flow rate | 0,0 | 0,0 | 379,7 | 0,0 | 0,0 | 371,0 |
| Reference Air flow rate | 35,7 | 128,5 | 3,8 | 34,8 | 125,3 | 2,8 |
| Reference Air flow rate | 34,6 | 124,6 | 37,4 | 34,2 | 123,1 | 38,2 |
| Reference Air flow rate | 34,5 | 124,2 | 77,1 | 34,7 | 124,9 | 81,2 |
| Reference Air flow rate | 34,5 | 124,2 | 121,0 | 35,4 | 127,4 | 122,3 |
| Reference Air flow rate | 35,4 | 127,4 | 161,5 | 36,4 | 131,0 | 159,4 |
| Reference Air flow rate | 36,0 | 129,6 | 195,1 | 37,3 | 134,3 | 201,5 |
| Reference Air flow rate | 36,3 | 130,7 | 239,7 | 38,4 | 138,2 | 240,0 |
| Reference Air flow rate | 33,7 | 121,3 | 279,3 | 36,2 | 130,3 | 275,8 |
| Reference Air flow rate | 25,9 | 93,2 | 322,3 | 27,8 | 100,1 | 315,6 |
| Reference Air flow rate | 11,7 | 42,1 | 359,9 | 11,8 | 42,5 | 354,3 |
| Reference Air flow rate | 0,0 | 0,0 | 379,2 | 0,0 | 0,0 | 371,5 |
| Min. Air flow rate | 22,5 | 81,0 | 6,1 | 21,8 | 78,5 | 4,6 |
| Min. Air flow rate | 21,3 | 76,7 | 40,5 | 21,3 | 76,7 | 40,2 |
| Min. Air flow rate | 21,8 | 78,5 | 84,1 | 22,1 | 79,6 | 83,8 |
| Min. Air flow rate | 23,2 | 83,5 | 122,3 | 23,3 | 83,9 | 120,2 |
| Min. Air flow rate | 23,8 | 85,7 | 162,0 | 24,4 | 87,8 | 159,7 |
| Min. Air flow rate | 24,3 | 87,5 | 202,3 | 25,4 | 91,4 | 205,1 |
| Min. Air flow rate | 25,0 | 90,0 | 242,8 | 26,2 | 94,3 | 241,7 |
| Min. Air flow rate | 25,4 | 91,4 | 284,3 | 26,5 | 95,4 | 275,6 |
| Min. Air flow rate | 18,7 | 67,3 | 325,1 | 19,3 | 69,5 | 315,3 |
| Min. Air flow rate | 14,5 | 52,2 | 353,0 | 12,4 | 44,6 | 352,1 |
| Min. Air flow rate | 0,0 | 0,0 | 382,8 | 0,0 | 0,0 | 372,3 |

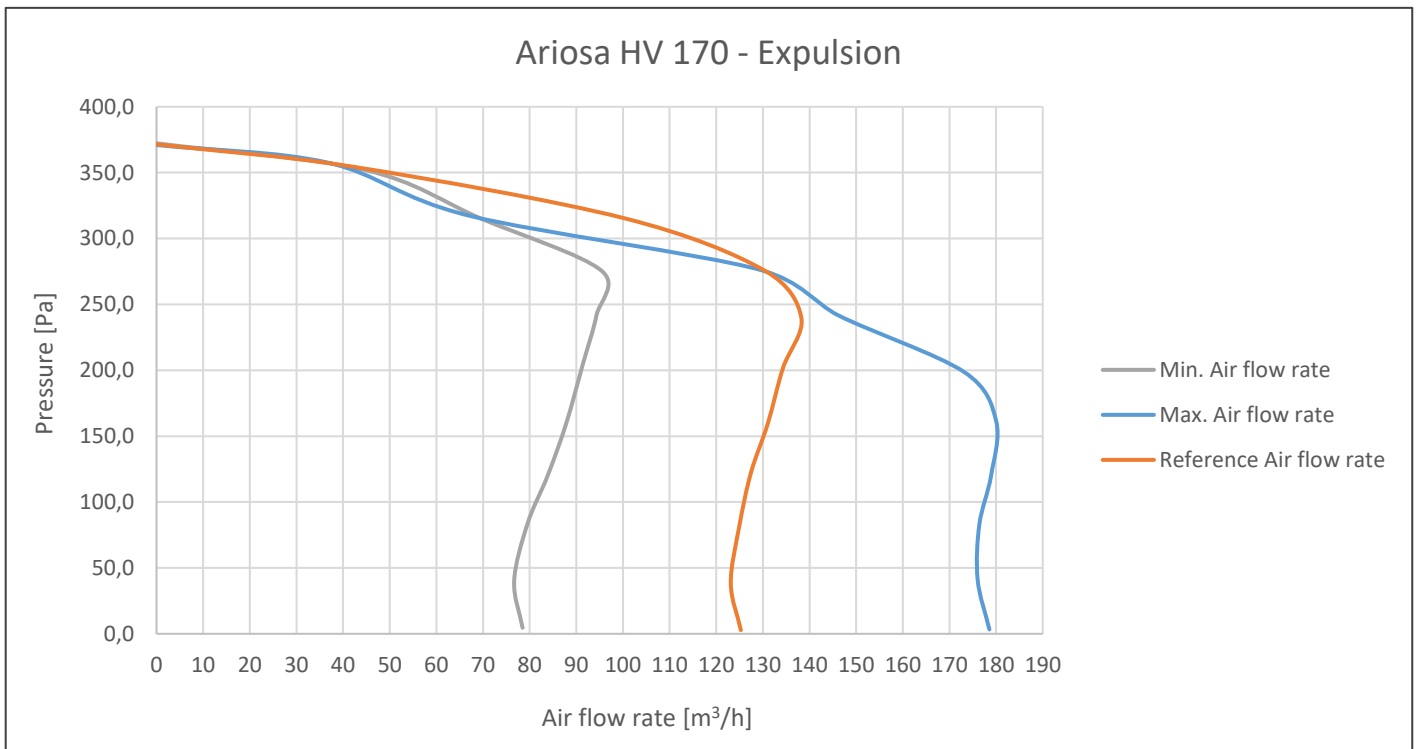
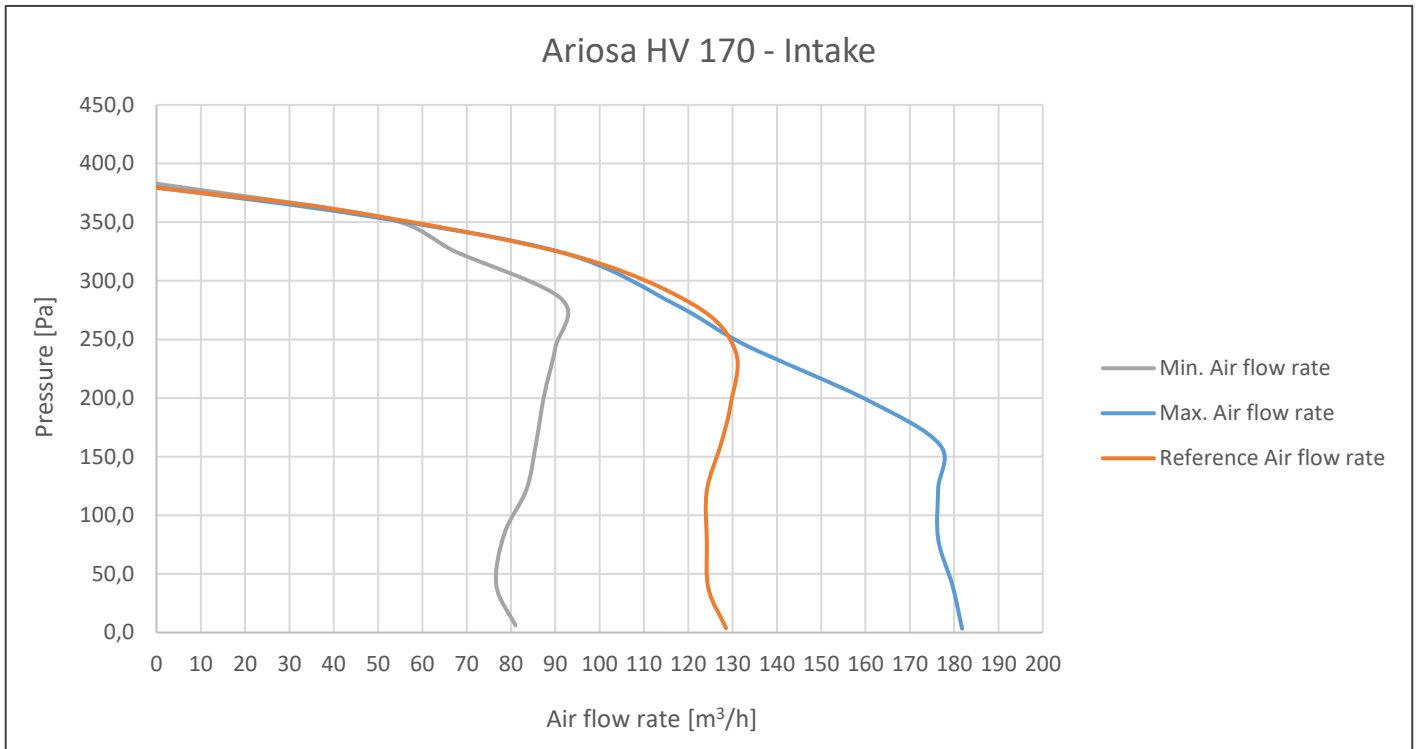


Table: Air flow rate and prevalence ARIOS A HV 170 E

| Speed | AIR IMMISSION | | | AIR EXTRACTION | | |
|-------------------------|---------------------|-----------------------------------|---------------|---------------------|-----------------------------------|---------------|
| | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] |
| Max. Air flow rate | 46,2 | 166,3 | 1,5 | 44,9 | 161,6 | 1,5 |
| Max. Air flow rate | 45,5 | 163,8 | 40,0 | 45,5 | 163,8 | 40,7 |
| Max. Air flow rate | 45,6 | 164,2 | 81,2 | 45,6 | 164,2 | 79,2 |
| Max. Air flow rate | 45,8 | 164,9 | 119,7 | 46,2 | 166,3 | 119,2 |
| Max. Air flow rate | 45,9 | 165,2 | 160,2 | 46,8 | 168,5 | 160,0 |
| Max. Air flow rate | 45,2 | 162,7 | 201,0 | 47,2 | 169,9 | 199,7 |
| Max. Air flow rate | 38,1 | 137,2 | 239,7 | 39,8 | 143,3 | 242,0 |
| Max. Air flow rate | 32,0 | 115,2 | 281,0 | 34,2 | 123,1 | 278,2 |
| Max. Air flow rate | 24,6 | 88,6 | 321,7 | 25,2 | 90,7 | 319,2 |
| Max. Air flow rate | 10,2 | 36,7 | 360,2 | 9,6 | 34,6 | 362,8 |
| Max. Air flow rate | 0,0 | 0,0 | 375,3 | 0,0 | 0,0 | 372,8 |
| Reference Air flow rate | 33,5 | 120,6 | 2,3 | 32,4 | 116,6 | 0,2 |
| Reference Air flow rate | 33,0 | 118,8 | 40,2 | 32,0 | 115,2 | 39,4 |
| Reference Air flow rate | 32,1 | 115,6 | 79,7 | 32,5 | 117,0 | 80,5 |
| Reference Air flow rate | 32,9 | 118,4 | 121,0 | 34,2 | 123,1 | 124,8 |
| Reference Air flow rate | 33,7 | 121,3 | 161,2 | 35,0 | 126,0 | 162,8 |
| Reference Air flow rate | 34,4 | 123,8 | 198,9 | 36,0 | 129,6 | 200,0 |
| Reference Air flow rate | 35,2 | 126,7 | 240,5 | 37,2 | 133,9 | 242,3 |
| Reference Air flow rate | 32,3 | 116,3 | 280,7 | 34,5 | 124,2 | 279,4 |
| Reference Air flow rate | 24,2 | 87,1 | 324,3 | 27,3 | 98,3 | 316,1 |
| Reference Air flow rate | 13,8 | 49,7 | 358,9 | 10,4 | 37,4 | 358,9 |
| Reference Air flow rate | 0,0 | 0,0 | 376,6 | 0,0 | 0,0 | 375,1 |
| Min. Air flow rate | 22,2 | 79,9 | 1,2 | 21,6 | 77,8 | 2,5 |
| Min. Air flow rate | 20,8 | 74,9 | 42,3 | 21,2 | 76,3 | 38,7 |
| Min. Air flow rate | 21,6 | 77,8 | 82,0 | 22,1 | 79,6 | 84,1 |
| Min. Air flow rate | 23,0 | 82,8 | 124,8 | 24,2 | 87,1 | 125,1 |
| Min. Air flow rate | 23,7 | 85,3 | 163,3 | 25,4 | 91,4 | 159,2 |
| Min. Air flow rate | 24,5 | 88,2 | 195,1 | 26,4 | 95,0 | 196,1 |
| Min. Air flow rate | 25,5 | 91,8 | 237,9 | 27,8 | 100,1 | 238,4 |
| Min. Air flow rate | 26,2 | 94,3 | 282,0 | 28,6 | 103,0 | 280,1 |
| Min. Air flow rate | 26,2 | 94,3 | 316,6 | 27,3 | 98,3 | 316,9 |
| Min. Air flow rate | 11,8 | 42,5 | 358,4 | 12,7 | 45,7 | 357,6 |
| Min. Air flow rate | 0,0 | 0,0 | 376,6 | 0,0 | 0,0 | 374,3 |

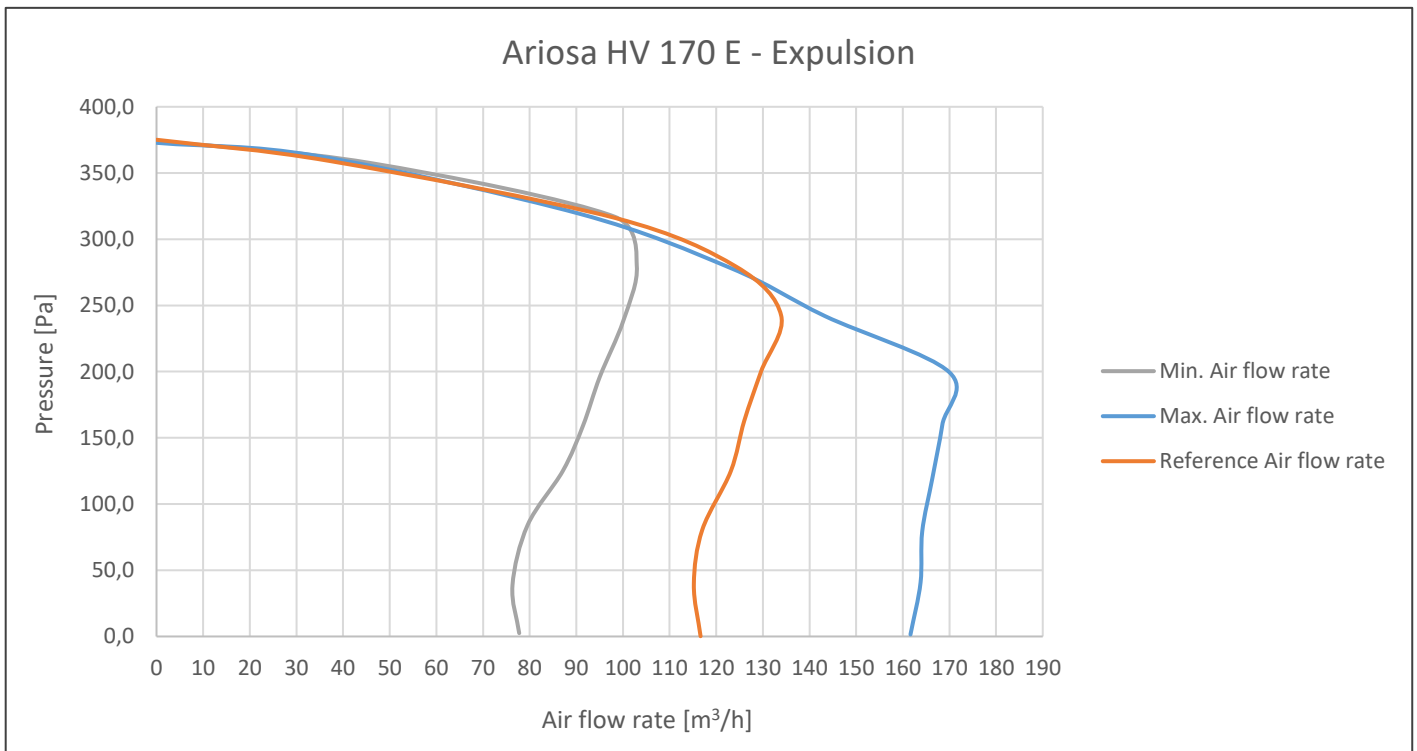
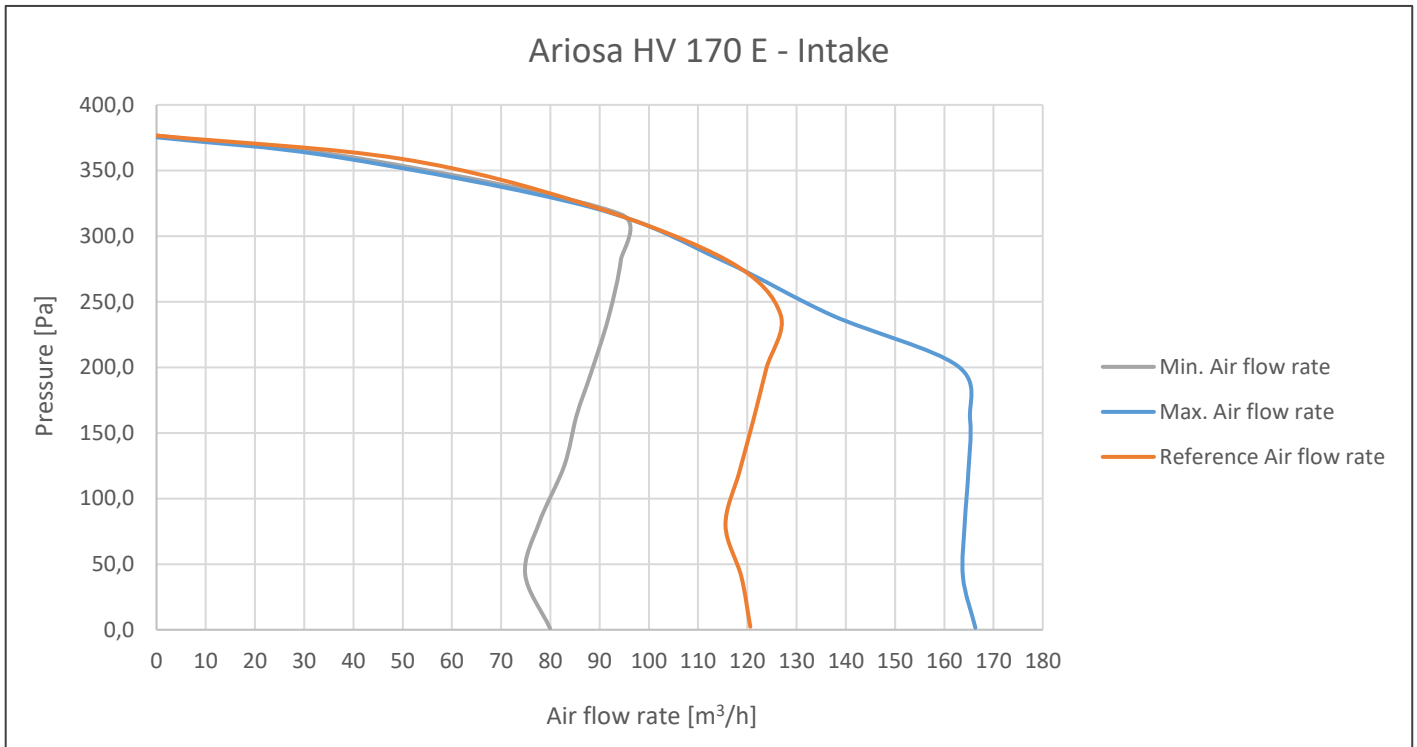


Table: Air flow rate and prevalence ARIOS A HV 250

| Speed | AIR IMMISSION | | | AIR EXTRACTION | | |
|-------------------------|---------------------|-----------------------------------|---------------|---------------------|-----------------------------------|---------------|
| | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] |
| Max. Air flow rate | 69,2 | 249,1 | 2,8 | 69,0 | 248,4 | 1,2 |
| Max. Air flow rate | 67,0 | 241,2 | 54,8 | 66,1 | 238,0 | 55,8 |
| Max. Air flow rate | 66,2 | 238,3 | 108,2 | 66,2 | 238,3 | 111,2 |
| Max. Air flow rate | 66,0 | 237,6 | 164,8 | 65,3 | 235,1 | 143,3 |
| Max. Air flow rate | 65,7 | 236,5 | 222,5 | 65,8 | 236,9 | 224,6 |
| Max. Air flow rate | 58,7 | 211,3 | 274,3 | 59,2 | 213,1 | 274,6 |
| Max. Air flow rate | 50,2 | 180,7 | 329,4 | 51,9 | 186,8 | 329,2 |
| Max. Air flow rate | 43,8 | 157,7 | 381,0 | 45,5 | 163,8 | 383,7 |
| Max. Air flow rate | 34,1 | 122,8 | 441,2 | 28,4 | 102,2 | 445,8 |
| Max. Air flow rate | 19,5 | 70,2 | 497,4 | 21,6 | 77,8 | 494,6 |
| Max. Air flow rate | 0,0 | 0,0 | 534,8 | 0,0 | 0,0 | 528,2 |
| Reference Air flow rate | 47,0 | 169,2 | 3,3 | 45,9 | 165,2 | 6,9 |
| Reference Air flow rate | 47,1 | 169,6 | 57,9 | 46,4 | 167,0 | 56,4 |
| Reference Air flow rate | 47,2 | 169,9 | 107,6 | 47,3 | 170,3 | 106,9 |
| Reference Air flow rate | 48,2 | 173,5 | 168,9 | 48,3 | 173,9 | 167,1 |
| Reference Air flow rate | 48,8 | 175,7 | 216,6 | 48,9 | 176,0 | 217,4 |
| Reference Air flow rate | 49,9 | 179,6 | 272,5 | 50,7 | 182,5 | 277,6 |
| Reference Air flow rate | 50,5 | 181,8 | 329,4 | 51,6 | 185,8 | 331,2 |
| Reference Air flow rate | 43,8 | 157,7 | 383,0 | 45,6 | 164,2 | 383,8 |
| Reference Air flow rate | 34,1 | 122,8 | 442,5 | 35,9 | 129,2 | 442,5 |
| Reference Air flow rate | 20,1 | 72,4 | 495,8 | 21,1 | 76,0 | 489,5 |
| Reference Air flow rate | 0,0 | 0,0 | 536,4 | 0,0 | 0,0 | 535,1 |
| Min. Air flow rate | 21,9 | 78,8 | 3,5 | 20,8 | 74,9 | 2,8 |
| Min. Air flow rate | 21,4 | 77,0 | 52,3 | 21,4 | 77,0 | 54,8 |
| Min. Air flow rate | 22,9 | 82,4 | 108,1 | 23,5 | 84,6 | 110,5 |
| Min. Air flow rate | 24,3 | 87,5 | 165,6 | 24,5 | 88,2 | 143,5 |
| Min. Air flow rate | 25,3 | 91,1 | 220,5 | 26,0 | 93,6 | 220,2 |
| Min. Air flow rate | 25,8 | 92,9 | 274,3 | 27,4 | 98,6 | 271,5 |
| Min. Air flow rate | 27,5 | 99,0 | 343,5 | 29,4 | 105,8 | 357,4 |
| Min. Air flow rate | 28,0 | 100,8 | 387,6 | 29,9 | 107,6 | 380,0 |
| Min. Air flow rate | 27,9 | 100,4 | 439,2 | 30,1 | 108,4 | 416,6 |
| Min. Air flow rate | 18,5 | 66,6 | 494,6 | 21,3 | 76,7 | 494,8 |
| Min. Air flow rate | 0,0 | 0,0 | 535,6 | 0,0 | 0,0 | 533,3 |

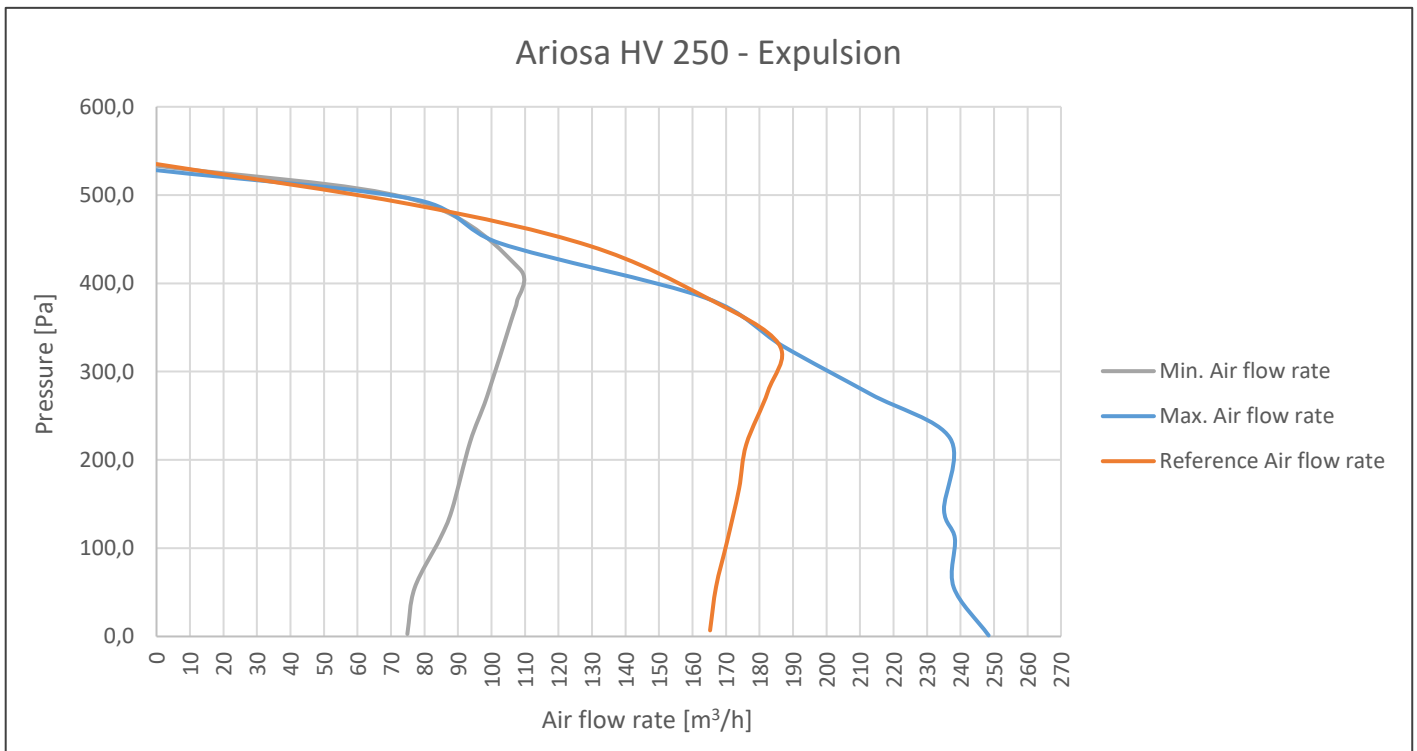
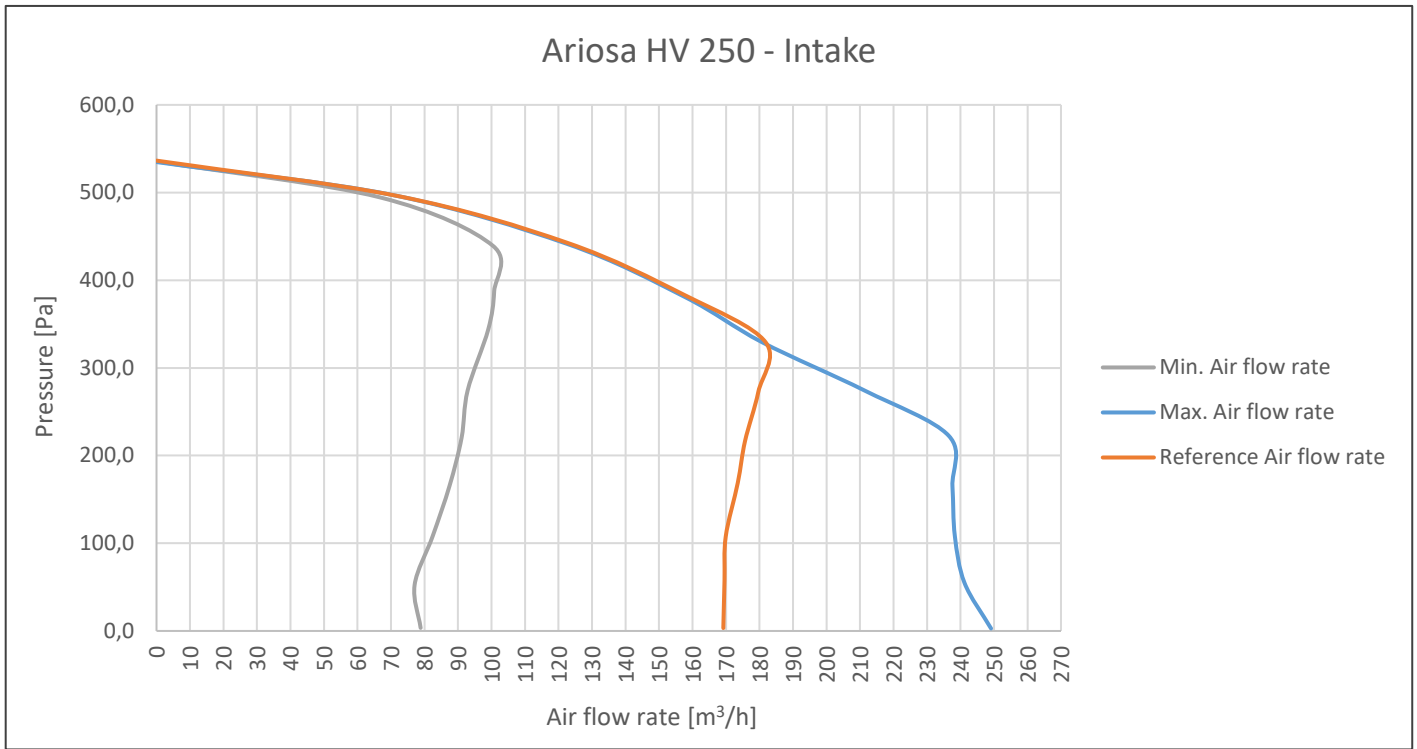


Table: Air flow rate and prevalence ARIOS A HV 250 E

| Speed | AIR IMMISSION | | | AIR EXTRACTION | | |
|-------------------------|---------------------|-----------------------------------|---------------|---------------------|-----------------------------------|---------------|
| | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] | Air flow rate [l/s] | Air flow rate [m ³ /h] | Pressure [Pa] |
| Max. Air flow rate | 71,3 | 256,7 | 5,1 | 68,9 | 248,0 | 2,8 |
| Max. Air flow rate | 70,5 | 253,8 | 56,9 | 69,9 | 251,6 | 57,1 |
| Max. Air flow rate | 68,9 | 248,0 | 108,2 | 69,8 | 251,3 | 108,9 |
| Max. Air flow rate | 68,1 | 245,2 | 163,8 | 68,5 | 246,6 | 161,6 |
| Max. Air flow rate | 64,3 | 231,5 | 218,4 | 68,5 | 246,6 | 220,2 |
| Max. Air flow rate | 57,5 | 207,0 | 274,1 | 60,7 | 218,5 | 273,3 |
| Max. Air flow rate | 48,4 | 174,2 | 330,2 | 51,9 | 186,8 | 330,5 |
| Max. Air flow rate | 41,9 | 150,8 | 384,8 | 45,2 | 162,7 | 384,3 |
| Max. Air flow rate | 33,3 | 119,9 | 438,4 | 36,4 | 131,0 | 437,9 |
| Max. Air flow rate | 20,0 | 72,0 | 497,6 | 20,0 | 72,0 | 494,6 |
| Max. Air flow rate | 0,0 | 0,0 | 538,7 | 0,0 | 0,0 | 528,2 |
| Reference Air flow rate | 49,1 | 176,8 | 1,7 | 48,8 | 175,7 | 0,2 |
| Reference Air flow rate | 48,1 | 173,2 | 59,2 | 48,5 | 174,6 | 57,6 |
| Reference Air flow rate | 48,5 | 174,6 | 68,7 | 49,2 | 177,1 | 109,7 |
| Reference Air flow rate | 48,4 | 174,2 | 166,1 | 49,8 | 179,3 | 164,3 |
| Reference Air flow rate | 48,6 | 175,0 | 219,7 | 50,0 | 180,0 | 218,7 |
| Reference Air flow rate | 48,9 | 176,0 | 274,8 | 51,0 | 183,6 | 273,0 |
| Reference Air flow rate | 48,7 | 175,3 | 327,4 | 51,5 | 185,4 | 327,1 |
| Reference Air flow rate | 42,1 | 151,6 | 381,5 | 45,5 | 163,8 | 388,3 |
| Reference Air flow rate | 33,7 | 121,3 | 434,1 | 36,8 | 132,5 | 434,1 |
| Reference Air flow rate | 19,5 | 70,2 | 500,2 | 17,1 | 61,6 | 498,7 |
| Reference Air flow rate | 0,0 | 0,0 | 538,0 | 0,0 | 0,0 | 529,2 |
| Min. Air flow rate | 22,5 | 81,0 | 2,0 | 23,1 | 83,2 | 3,0 |
| Min. Air flow rate | 20,9 | 75,2 | 55,1 | 21,7 | 78,1 | 52,8 |
| Min. Air flow rate | 22,3 | 80,3 | 107,4 | 23,3 | 83,9 | 107,7 |
| Min. Air flow rate | 23,4 | 84,2 | 164,6 | 24,7 | 88,9 | 164,8 |
| Min. Air flow rate | 23,9 | 86,0 | 217,6 | 26,1 | 94,0 | 222,3 |
| Min. Air flow rate | 24,7 | 88,9 | 270,2 | 27,5 | 99,0 | 275,1 |
| Min. Air flow rate | 25,8 | 92,9 | 335,3 | 28,0 | 100,8 | 324,3 |
| Min. Air flow rate | 26,9 | 96,8 | 407,4 | 29,3 | 105,5 | 384,1 |
| Min. Air flow rate | 24,2 | 87,1 | 455,3 | 26,3 | 94,7 | 453,3 |
| Min. Air flow rate | 11,0 | 39,6 | 503,8 | 18,6 | 67,0 | 496,1 |
| Min. Air flow rate | 0,0 | 0,0 | 539,2 | 0,0 | 0,0 | 529,2 |

